STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	Docket No. 99-DIST-GEN-(2)
	)	
Exploring Revisions to Current Interconnection	)	
Rules Between Investor-owned and	)	Energy Commission Distributed
Publicly-owned Utility Distribution Companies	)	Generation Strategic Plan
And Distributed Generators	)	
	)	
Evaluating CEQA Procedures for Siting	)	
Distributed Generation Facilities	)	

COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY ON SITING COMMITTEE DRAFT STRATEGIC PLAN FOR DISTRIBUTED GENERATION

1. Introduction and General Comments On The Draft

PG&E appreciates the opportunity to further participate in helping the CEC develop its Strategic Plan for Distributed Generation (DG) by providing these comments on the draft Strategic Plan released on May 1, 2002.

In general, PG&E believes that the Committee and its staff have done an excellent job in developing the draft of a Strategic Plan for the Commission. PG&E has long supported the right of customers to install generation on their side of the meter, provided it is done in accordance with safety and reliability considerations. PG&E has also actively participated in a CEC-led effort to streamline the interconnection rules for DG projects, and has established a department that is singularly focused on interconnecting both small and large generating projects. PG&E also recognizes the desire to promote "clean" DG technologies for environmental reasons, and supports the principle that generation of all sizes can help to keep supply and demand in balance. The draft is consistent with these key values. In addition, it contains useful information about the current status of DG in California, and several recommendations of areas where the CEC and others in California governments could head in the future. PG&E agrees with many of these suggestions.

There are several areas, however, where the report could be improved by modest changes, which are discussed below. In addition, PG&E understands that the Commission will hold a hearing on he Commission's draft Strategic Plan on May 22nd. Dennis Keane, PG&E's manager of Service Analysis, will be available and present to testify at that hearing. Dr. Keane has participated extensively in DG policy discussions, and has testified for PG&E on the topic.

2. The Proposed Definition of "DG" And Market Share Figures Should Be Revised.

The draft Strategic Plan proposes to define DG as "generation, storage, or demand-side management devices, measures, and/or technologies connected to the distribution level of the transmission and distribution grid, usually located at or near the intended place of use." Draft p. 3. PG&E agrees that at least on its system, where lines 60 kV and higher are classified as transmission, it is appropriate to define DG as generation interconnected at the distribution level.[1] However, it is incorrect to include "demand-side management (DSM) devices" in the definition of "Distributed *Generation*." DSM and DG, while having some similar aspects, are separate and distinct approaches for balancing supply and demand. In the DG OIR, many parties used the phrase Distributed Energy Resources to describe the broader set which includes both demand and generation tools, arguing that from a customer perspective, both sets of tools may serve similar purposes. However, it is simply wrong (not to mention confusing and misleading) to term DSM programs a form of "generation."

In addition, the draft Strategic Plan claims that more than 3,000 MW of DG is currently operating in California. See figures at pages 2, 8, and 9 of the report. However, while this may be an accurate figure for the amount of self-generation now operating in California, it is far too high a figure for operating distribution level projects. Most of the capacity associated with existing self-generation plants is in units interconnected at transmission level, including projects in the 50 to 200 MW range. Virtually no one would call a 50 or 200 MW plant a "DG" unit, even if it is installed to meet the customer's own load and never delivers to the grid. There is no difference between the many 49 MW units being installed as merchant plants right now and the 49 MW units installed as on-site generation. On PG&E's system, projects larger than 10 MW are virtually never interconnected to the distribution system. Accordingly, the figures in report

[1] FERC has accepted a different dividing point for the transmission and distribution systems of Southern California Edison. For SDG&E and PG&E, 60 kV lines are considered to be "transmission." For SCE, FERC accepted the CPUC determination that lines between 60 kV and 138 kV are considered local distribution lines, rather than transmission lines. See *Pacific Gas and Electric Company*, 77 FERC ¶ 61,077 (1996).

for the amount of DG now on line should be revised to reflect the amount of that generation actually interconnected at distribution level.

3. PG&E Strongly Supports The Proposal That The Commission Inventory and Evaluate Current Subsidies, But Encourages The Commission To Do This In Less Than Three to Five Years.

On page 34 of the draft Strategic Plan, the Commission proposes to inventory all state and federal subsidies for DG technologies, and then evaluate the appropriate role of the government in encouraging and subsiding DG technologies, as opposed to other means of balancing supply and demand. PG&E strongly supports this proposal. It notes that this appears in the first time period covered by the draft Strategic Plan, which is the next 3-5 years. However, PG&E encourages the CEC to work with the CPUC on this question on a faster schedule.

As PG&E noted earlier, the Commission must face the question of "What is the appropriate role of government in encouraging and/or subsidizing certain DG technologies versus other available means of balancing supply and demand and ensuring reliability of the transmission and distribution systems in the state?" In the last two years, the state enacted legislation providing for a variety of subsidies for certain types of DG technologies, which resulted in programs providing hundreds of millions of dollars in customer rebates, waivers of utility standby charges, new tax incentives, and extensions of the eligibility requirements for customers to take advantage of net metering. More such subsidies are being contemplated by a myriad of DG-related bills in the current legislative session. These subsidies are in addition to numerous forms of encouragement that were already available in the form of tax breaks for certain DG technologies and lower gas rates and exemptions from CTC obligations for customers installing DG units in cogeneration applications.

However, while the state still faces generation challenges, the worst of the supply crisis is apparently over, and it is time to step back and evaluate what kinds and levels of subsidy of DG are prudent. The current "calm" represents a golden opportunity for this Commission, in conjunction with the California Public Utilities Commission (CPUC) and other state agencies, to undertake a thorough and comprehensive evaluation of the cost-effectiveness of promoting DG versus new central station technologies and/or demand-side programs (energy efficiency and load management) which can achieve the same goals at perhaps lower costs and with more benign environmental consequences. The question of cost-effectiveness is a threshold issue that needs to be addressed immediately. It is poor public policy to adopt a strategy to encourage DG

without first ascertaining whether it is cost-effective to do so. Failing to do so risks wasting millions of dollars in ratepayer/taxpayer money.

Because such a study has not yet been completed, the Commission may want to modify some of the statements in the draft Report. For example, page 21 states that "state government could provide tax, financial or regulatory incentives to encourage deployment of DG or to research and develop technology advances." It would be prudent to complete a cost-benefit analysis before making any decision to provide additional cash to developers.

4. There Is No Need To Change The Role That DG Now Plays In Distribution Planning.

In several places, the report refers to utilities incorporating DG into their process of planning for distribution grid modifications. For example, on page 21, the draft Strategic Plan states "Utilities could be required to incorporate DG in distribution grid expansions…." Similarly, page 26 of the draft Plan states: "Electric utilities should explore a wider array of options to meet increasing demand for energy service when performing electric distribution or transmission system planning."[2] However, Public Utilities Code section 353.5 already provides that: "Each electrical corporation, as part of its distribution planning process, shall consider nonutility owned distributed energy resources as a possible alternative to investments in its distribution system in order to ensure reliable electric service at the lowest possible cost."

Moreover, as PG&E explained in testimony in the DG OIR, while there are some circumstances where DG can be a cost-effective substitute for new distribution lines or equipment, the occasions where this occurs are fairly rare and unusual. This issue was the subject of extended testimony in the DG OIR, on which the CPUC has not yet ruled. PG&E strongly encourages the CEC not to prejudge these pending issues, and not to adopt policies which encourage the utilities to pursue DG alternatives to distribution upgrades which are more expensive or less reliable than traditional investments in distribution facilities. Utility ratepayers should not have to bear higher distribution rates simply because the Commission wishes to develop a policy of encouraging DG even in applications where it is not the most cost-effective solution.

[2] Similarly, at pages 29 and 32, the draft Plan proposes to try to persuade the CA ISO, WECC, and NERC about the grid reliability benefits of DG. While PG&E has no objection to the CEC talking to these agencies about the topic, the dialogue should be two way, in which the CEC listens as well as talks. Similarly, page 31 of the draft Plan asks how to modify design tools and distribution design philosophy so DG "can become an integral part of the utility distribution system, where appropriate?" We do not know what is intended by these suggestions, and do not know that any change is needed in utility design philosophy, and therefore encourage changes to this language.

5. The CEC Should Encourage DWR or the CPA to Purchase Renewable DG, Or Provide Information About Available Wholesale Purchasers of DG Power.

In several places, the draft Plan identifies obstacles to the sale of DG. It notes the suspension of direct access, which eliminated one set of potential markets for excess DG output. Draft Plan page 19. However, the draft Plan claims that options remain to sell excess power in the wholesale market. Some DG developers disagree with this description. In particular, they note that neither SCE, SDG&E, nor PG&E are buying power, due to their financial difficulties, which led the state to take over the job of meeting the net open position. Some generators have also claimed that the Department of Water Resources is not regularly buying power, since it has enough power to meet needs other than during high load hours, and the California Power Authority has not yet begun signing contracts for the purchase of renewable power. Thus, some DG developers argue that no practical wholesale market remains.

Obviously, a DG developer needs to be able to find a purchaser if it is going to make sales of power. The CEC may want to look at the existence of a market for wholesale power for DG projects (perhaps out of state), and provide information to DG developers about buyers that exist for such power, if any. In the alternative, it may want to encourage DWR or the CPA to purchase power from renewable DG projects until such time as the utilities resume the burden of purchasing the net open position.

6. The Commission Should Continue Its Ongoing Interconnection Work.

The CEC's efforts have created a good foundation on which the state can continue to improve interconnection practices. The root of this effort is the ongoing interconnection workshop process, which is comprised of utility representatives, DG vendors and manufacturers, regulatory representatives and other interests. The draft Strategic Plan, at pages 33-34, proposes to continue this work, which PG&E applauds.

PG&E recommends that the CEC focus on the need for statewide clarity on when supplemental studies are required (or not) and on what protection is justified in various types/scenarios of interconnections. Page 33, item #5: 1 calls for standardized studies, but the Commission may wish to expand this language so that it addresses when studies are required and to cover protection. Right now, Rule 21 gives flexibility for individual IOU's to answer these questions, leading to different approaches to studies and protection requirements. Having statewide consensus via the Rule 21 working group or some other vehicle would promote less costly, lengthy and controversial interconnections for DG. The labor savings could be significant

if there were clear statewide requirements all parties point to as the determining factor. If the Rule 21 committee or IEEE P1547 process cannot get this done in six months, then the CEC may want to consider working with an independent electric engineering consultant to present alternatives.

That same section calls for enhancing the DG equipment certification program, which PG&E strongly supports. Having more equipment certified eases the administrative burden in processing applications and diminishes uncertainty and potential controversy when a utility rejects equipment or require further studies.[3]

Finally, the CEC proposes to support publicly owned utilities' adoption of Rule 21 interconnection standards. The draft notes that fifteen percent of the customers in California are serviced by publicly owned utilities, and that most of them do not now follow Rule 21. The CEC may want to consider whether to support legislation to make such interconnection standards applicable statewide.

7. The Commission Should Take Workload And Confidentiality Issues Into Account In Setting Up Any New Database Requirements.

Page 29 of the report calls for development of a database of all DG installations in California. This would include location and type of technology and diesel emergency/standby generation. PG&E does not maintain information on small generation which does not parallel with its T&D system. If the CEC wants a database beyond the ongoing updates already provided on a regular basis by the utilities,[4] it should mandate developers provide this information in return for eligibility for any state incentives. Increased requirements on IOU's to maintain and share databases will only add to costs, potentially delay interconnections, and heighten customer confidentiality concerns.

8. Miscellaneous Other Statements In The Draft Should Be Modified.

A few other items in the draft Strategic Plan should be modified. For example, item 3 on the bottom of page 32 purports to address expanding net metering to other types of DG in the

[3] This section proposes to investigate whether potential installations have been postponed or abandoned due to existing or prior interconnection rules or costs. It is not clear that such a study would be a prudent investment of the CEC's time. Whether a project is cost-effective on an overall basis depends on total costs, and it would be strange to focus a study on just one aspect of the overall costs of installing DG. If the CEC is going to do an overall review of the cost-effectiveness of DG, taking into account all costs, that would be a more interesting study.

[4] For example, under California Code of Regulations, Title 20, Section 1304(b), utility distribution companies are required to provide the CEC a biennial report of all generators interconnected with them, but they may mark as confidential much of the information about customer-owned generation. Similarly, the utilities provide a report to the CEC-lead Rule 21 group each month, but this report does not include customer names.

subject heading. The phrase "net metering" is generally used by the DG community to refer to the subsidy provided pursuant to Public Utilities Code section 2827, in which the meter for qualifying projects (wind and solar) actually runs backwards, allowing these projects to escape a variety of utility charges on anything other than the net generation taken from the utility over the course of a year. However, the discussion below the heading appears to concern an unrelated set of issues that have separated the California ISO and various generators concerning whether the ISO will have access to and base charges on gross or net generation output when a generation project serves on-site load and does not move power across the grid. Although the phrase "net metering" may appear in discussions of both topics, they are entirely unrelated issues. PG&E opposes expansion of eligible technologies under section 2827, and notes that some of the arguments in support of this type of net metering apply only to the solar and wind technologies that now qualify.[5] To the extent the draft is addressing the ISO gross versus net metering issues, this section should be clarified.

The very last item in the Report, on page 36, as long term goal number 2, is that "By the year 2020, 20 percent of all incremental generation will be DG." It is not clear what public policy is served by this proposed goal, and its inclusion raises a serious concern (raised earlier in our comments) that the CEC not develop a policy of encouraging DG if it is not the cost-effective and environmentally preferred option. If DG is less efficient, more polluting, and more expensive than central station generation in 2020, why should this power source supply 20 percent of all new generation? Does the CEC have any specific information demonstrating that this will be the appropriate market share eighteen years from now? This figure lacks any empirical support and is simply inappropriate in a report that otherwise is as carefully crafted and practical as this report. It should be deleted.

4. Conclusion

The draft Strategic Plan is well prepared, and for the most part, something that PG&E supports. PG&E appreciates the opportunity to discuss these issues with the Commission.

Dated: May 15, 2002.

[5] For example, some have argued that solar and wind projects provide a special benefit of providing output that may match peak power needs, since these units produce their greatest output in late afternoon (or when the sun is shining). These arguments do not apply to other technology such as microturbines or fuel cells that run around the clock.

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